ATTACHMENT 9

City of Rockville

MEMORANDUM

August 26, 2004

TO: Bob Spalding, Chief of Planning, AICP

FROM: Randy Clay, Planning Technician RC

SUBJECT: Sidewalk Design Standards

BACKGROUND

The Mayor and Council have raised concerns about appropriate sidewalk standards for the Town Center. Staff has conducted a survey of recommended sidewalk standards for mixed use commercial areas to provide background information for further consideration.

The survey includes recommended standards from nationally recognized experts such as the U.S. Dept. of Transportation, Walkable Communities, Inc. (Dan Burden), Duany Plater-Zyberk, The Institute of Transportation Engineers, and American Planning Association. The survey also includes standards from other urbanized commercial areas in California, Oregon, Virginia, Texas, Georgia, Massachusetts, Washington, and Washington, D.C.

The following table includes the results from individual sources:

Comparative Analysis of Sidewalk Standards

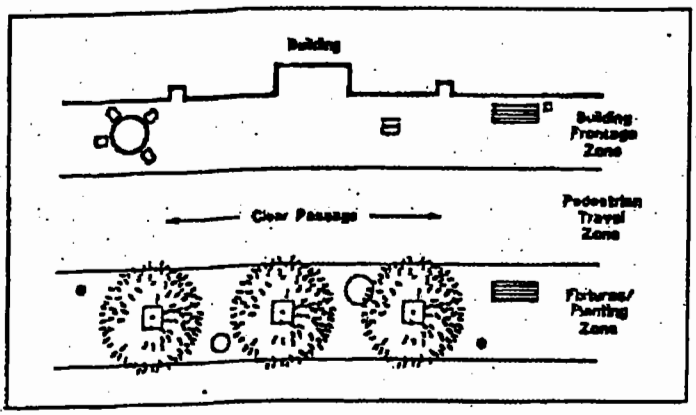
Developed Area Classification	Commercial and Mixed Use Areas/Major Pedestrian Corridors/Urban Core/Urban Center Business District/Transit Corridors/Downtowns/Town Centers
Pedestrian Travel Zone	
Desirable	8 ft to 37 ft
Minimum	5 ft to 6 ft
Street Edge/Sidewalk Zone	
Desirable	6 ft to 10 ft
Minimum	3 ft to 4 ft
Building Frontage Zone	
Desirable	6 ft to 10 ft
Minimum	5 in to 2 ft

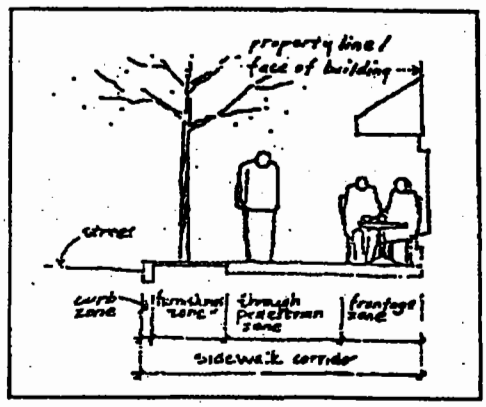
**Data for this study were compiled from guideline, ordinance, and report materials. A cross section of government agencies from eight states, research organizations, and various media publications comprise the source material used in the final analysis.*

This survey supplements the Streetscape Elements Survey (Fall 2003), which provided examples of both street and sidewalk dimensions in nearby urbanized areas. A copy of this survey is attached and includes new material from this study.

SUMMARY OF FINDINGS

The below figures illustrate the concepts of passive and active space incorporated into the design of sidewalk facilities. By applying three separate zones, areas are created for pedestrian travel, rest, and socializing activities.





Sources: *Pedestrian Facilities Guidebook*, Washington State. *Portland Pedestrian Design Guide*, Portland, Oregon.

The study uses an urban classification system to group standards based on the type of uses supported by the streetscape. The findings reflect the need to separate public sidewalks into functional spaces as they relate to three independent zones. These will be referred to as the pedestrian zone, the street edge and sidewalk buffer zone, and building face zone. The attached table details the standards identified by design experts and in various urban areas.

The widths of sidewalks in mixed use urban areas between the curb and building face range from 8 feet to 37 feet. However, most are between 10 and 20 feet. For the unobstructed walkway, most pedestrian zones range from 6 to12 feet. The majority of zones buffering these walkways from roadway range from 4 to 6 feet. Additionally, space directly fronting a building edge can range anywhere from 5 inches to10 feet depending on need. Collectively, these figures describe standards for an overall range between 10 ½ to 28 feet be used in design of sidewalk facilities in urban areas with a more common range yielding between 10 and 20 feet as mentioned above.

A brief description of each zone follows:

PEDESTRIAN ZONE

A pedestrian zone acts as the exclusive walkway space for unobstructed travel and serves the mobility needs of users. At the very minimum, widths of 4 to 6 feet were recommended in the

study and reflect 34% of sources surveyed. Sidewalk widths of a minimum 5 feet were cited as necessary to accommodate the travel of two people walking side-by-side. In most accounts, where pedestrian activity is more intense, the need to establish even wider standards is noted. A range of 8 feet to 20 feet reflects this need among more intense urban land uses and accounts for 61% of urban areas in the study. There were also two outlier figures of 30 and 37 foot sidewalk widths. Total sidewalk widths below 8 feet are typically outside of major mixed-use commercial areas and are included for reference.

STREET EDGE & SIDEWALK BUFFER ZONE

The street edge and sidewalk buffer zone serves to create a barrier between roadways and pedestrian traffic. Passive activity areas may be carved from these areas providing opportunities for rest as well. Based on minimum and desirable width figures, 76% of the survey recommend allocating four to six feet of public space to this treatment. Benefits sited for its inclusion range from providing a higher level of comfort for pedestrians to sighting of pedestrian obstructions such as light poles, road signage, and bus shelters. These spaces are also mentioned as ideal for snow storage as well as aid in the prevention of pedestrians being splashed with elements within roadways.

BUILDING FRONTAGE ZONE

A building frontage zone allows the opportunity to project expressions of retail uses beyond the building face and into the public realm. The survey reflects a growing focus on the separation of this area. Two interesting standards emerge. First, a minimum width of 5 inches to 2 feet can be used to achieve the purpose of the zone. Second, where it is desired, these widths can range from 6 to10 feet. These dimensions would be utilized for the location of outdoor cafes or vending operations. Examples are illustrated in the accompanying attachment.

Further, the survey alludes to the flexibility built into the placement of each zone. A hierarchal balance within these public spaces is achieved through the location of each zone in the most ideal right-of-way. This characteristic allows streetscape design to adapt to the many constraints imposed upon specific sights. The recommended ranges between minimum and desirable standards for each zone further reinforce this trait found throughout the survey.

Attachment: Sidewalk Standards Survey
Attachment: Streetscape Elements Survey

SIDEWALK STANDARDS SURVEY

SOURCE	Condition/Area/Street Type	Pedestrian Travel Zone: Exclusive Pedestrian Travel Way		Street Edge/Sidewalk Buffer Zone: Utility Fixtures/Planting/Furniture		Building Face Zone: Outdoor Seating/Retail Expressions		Combined Standard		Illustration/ Figure
		Minimum	Desirable	Minimum	Desirable	Minimum	Desirable	Minimum	Desirable	
Americans with Disabilities Act	Minimum clear passage-one wheelchair	4 ft						4 ft		
DeChiara and Koppelman-proportional width to projected user volume	Minimum sidewalk width for two-way traffic	4 ft	8 ft					4 ft	8 ft	
Utah League of Cities and Towns- Town of Eagle Mountain, Utah	Areas other than retail, service commercial, and mixed use	4 ft						4 ft		
Dan Nozzi-Myths and Principals of New Urbanism	Minimum width for unobstructed walkway	5 ft						5 ft		7
Americans with Disabilities Act	Minimum clear passage-two wheelchair	5 ft						5 ft		7
Dan Burden- Walkable Communities, Inc.	Minimum requirement for two people walking side-by-side	5 ft	6 ft					5 ft	6 ft	3
Colorado Springs, Colorado Mixed Use Development Design Manual	Minimum width-mixed use development	8 ft						8 ft		13
Arlington County, Virginia	Minimum width in low density single family n'hoods	4 ft						4 ft		
Arlington County, Virginia- Walk Arlington	Minimum width in medium density townhouse and small commercial areas	6 ft		2.5 ft	4 ft			8.5 ft	8 ft	
U.S. Department of Transportation (FHWA)	Local or collector streets- clear unobstructed width	5 ft		2 ft	4 ft			6.5 ft	10 ft	
Puyallup, Washington	Minimum width- commercial areas	8 ft						7 ft	8 ft	
U.S. Department of Transportation (FHWA)	Along parks, schools, and other major pedestrian generators	8 ft						8 ft		
Dan Burden- Walkable Communities, Inc.	High pedestrian volumes in commercial and school districts	8 ft	10 ft					8 ft	10 ft	2
Alhamarle County, Virginia	Minimum width-commercial areas	8 ft	12 ft	4 ft	6 ft			8 ft	12 ft	
Sacramento, California Transportation & Air Quality Collaborative	Mixed use/pedestrian/family	8 ft						8 ft		
The Institute of Transportation Engineers (ITE)	Minimum width for unobstructed walkway	8 ft						8 ft		
Utah League of Cities and Towns- Town of Eagle Mountain, Utah	Retail and service commercial and mixed use areas	5 ft		4 ft	6 ft			9 ft	11 ft	
Portland, Oregon Pedestrian Design Guide	Recommended configuration of sidewalk corridor where street ROW is < 80'	10 ft						10 ft		
U.S. Department of Transportation (FHWA)	Arterial or major streets-clear unobstructed width	5 ft		4 ft		.5 ft		10 ft		17,18
Washington State Pedestrian Facilities Guidebook	Minimum width-urban center/business district (principal/minor arterials: 64ft to 100ft)	8 ft		4 ft	6 ft			10 ft	14 ft	
Dutchess Land Conservancy, Inc.- New York	Minimum width-commercial areas	8 ft	10 ft	3 ft	10 ft	2 ft	10 ft	10 ft	15 ft	17
Annapolis, Maryland-Street Tree Plan	Minimum sidewalk for urban areas	6 ft		4 ft	10 ft			10 ft	16 ft	
Portland, Oregon Pedestrian Design Guide	Recommended configuration of sidewalk corridor where street ROW is 80'	8 ft		2 ft				10 ft		
Local Government Commission	Street design connecting town centres and neighborhoods- 82 ft ROW	5	8	4ft		.5 ft		11 ft		16
Anton Nelessen-sliding scale for width based on numbers of travelers	Minimum width for four (4) people walking side by side	11.6 ft		6				11	16	17
Rockville Town Center Design Guidelines	Maunakea Street- west side (formerly Market St.)	12ft						11.6 ft		19
Portland, Oregon Pedestrian Design Guide	Recommended configuration of sidewalk corridor where street ROW is 80'	8ft		4 ft		1 ft	8 ft	12 ft		19
Rockville Town Center Master Plan	North Washington Street walk	12 ft	16 ft					12 ft	16 ft	19
City of Sea-Tac, Washington	Streets designated as major pedestrian corridors	12 ft	16 ft					12 ft	16 ft	
U.S. Department of Transportation (FHWA)	CBD areas	8 ft	12 ft	4 ft	6 ft			12 ft	18 ft	
Duany Plater-Zyberk SmartCode- T5 Urban Center/ T6 Urban Core Zone	Stanford street/avenue/boulevard	8 ft	16 ft	4 ft (continuous strip)	6 ft			12 ft	22 ft	
Duany Plater-Zyberk SmartCode- T5 Urban Center/ T6 Urban Core Zone	Commercial street/avenue/boulevard	12 ft	24 ft	4 ft	6 ft			12 ft	24 ft	
Anton Nelessen-sliding scale for width based on numbers of travelers	Minimum width for five (5) people walking side by side	13 ft						13 ft	-	
Arlington County, Virginia- Walk Arlington	Minimum width in high density County Metro corridors (mixed-use/commercial areas)	10 ft		4 ft	6 ft			14 ft	16 ft	
Smart Growth Network-Reid Ewing	Minimum width for two couples passing-high volume location	10 ft		2.5 ft		1.5 ft		14 ft		
Washington, District of Columbia- Downtown Streetscape Regs.	Minimum widths for pedestrian movement and street tree planting-Downtown BID	10 ft		4 ft				14 ft		
Local Government Commission	Street design providing scenes and space for mixed commercial and mixed- 56 ft ROW	8		6				14 ft		17
Midtown Alliance- City of Atlanta, Georgia	Minimum sidewalk width	10 ft		5ft				15 ft		
American Planning Association- Jim Schutz and Kelly Kline	Width to accommodate flexible retail space patios or outdoor dining	15 ft						15 ft		
Portland, Oregon Pedestrian Design Guide	Recommended configuration of sidewalk corridor where street ROW is 80'	8 ft		4ft		2 ft	6 ft	15 ft		19
Rockville Town Center Design Guidelines	Maunakea Street- east side (formerly Market St.)	18 ft						18 ft		19
Rockville Town Center Design Guidelines	North Washington Street walk- east side	8 ft		7ft				15 ft		19
Albemarle County, Virginia	Minimum width- higher density commercial areas	15 ft	18 ft					15 ft	18 ft	19
Rockville Town Center Design Guidelines	Maryland Avenue- (both sides)	10 ft		8ft				18 ft		19
Rockville Town Center Master Plan	Maryland Ave. pedestrian zone with sidewalk (west side)	12 ft	16 ft	6ft				18 ft	21 ft	19
K Street, Washington, D.C.	Sidewalk widths to handle transit off-loading and commercial activity	20 ft						20 ft		
Dan Burden- Walkable Communities, Inc.	Large successful downtowns (not defined)	20	36 ft	4 ft	6 ft			20 ft	36 ft	6,12
San Jose, Texas	Downtown pedestrian retail environment	20 ft						20 ft		
Rockville Town Center Master Plan	Maryland Ave. pedestrian zone with sidewalk (east side)	18 ft		3 ft				21 ft		19
Downtown Silver Spring, Silver Spring, Maryland	Eleventh Dr, between Fenton St. and Georgia Ave.	5 ft		6 ft		10 ft		21 ft		8
Bethesda Row, Bethesda Maryland	Woodmont Ave, between Bethesda Ave. and Elm St.	8 ft		7.5 ft		10 ft		23.5 ft		
Pennsylvania Avenue, Washington, D.C.	Sidewalk width to handle tour bus operations	30 ft						30 ft		
South Bronx, Massachusetts- Midway Street Project	Grand boulevard width- shops, cafes, and high pedestrian traffic	37 ft						37 ft		

Other Standards:

Dan Burden- Walkable Communities, Inc.	Highly successful downtowns (not defined)	50/50 ratio of sidewalk to street	4 ft	6 ft
American Institute of Architects	Street standard proportional to building size for an enclosed and intimate scale	1:3 building height to street width		
		(3 increments of street/sidewalk width for every 1 increment of building height)		

50/50 ratio of sidewalk to street

1:3 building height to street width

SOURCE: Data for this study were compiled from guideline, ordinance, and report materials. A cross section of government agencies from eight states, research organizations, and various media publications comprise the source material used in the final analysis.

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